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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/045,385	03/20/1998	YASUHIRO MATSUSHIMA	48240	9820

7590

10/04/2002

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EXAMINER

PARKER, KENNETH

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/045,385

Applicant(s)

MATSUSHIMA ET AL.

Examiner

Kenneth A Parker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 8/22/02
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5,7 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5,7 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 3, 5, 7 and 18-20 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al, U.S. Patent #5933,208, in view of Shirahashi et al U.S. Patent # 5,285,301, Sato et al, U.S. Patent # 6,081,305 and Miyawaki et al, U.S. Patent # 5,822,028.

Kim et al discloses a first insulating substrate with picture element electrodes in a matrix, a second opposite substrate with a counter electrode having portions above each pixel electrode, aligned and sealed with liquid crystal interposing, with the first substrate having switching elements line driving means, color filters and light shielding layers corresponding to the transistors. It is not clear from Kim that the black matrix goes around the perimeter. The use of a black matrix extends around the perimeter was notoriously well known for preventing light leakage and shielding for drive circuits, and would have been obvious for that reason. All the above listed secondary references show active matrix devices with black layers in the extending in the peripheral regions, and therefore provide evidence of this assertion of the well known status of these layers for the above mentioned purposes.

The counter electrode having portions which are parallel would always be present, as portions can be defined across from each pixel electrode.

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Driver circuits in the periphery was well known for reducing the cost of connecting separate drivers, and would have been obvious for that reason. Miyawaki et al evidences this, disclosing such a device. Further evidence of the well known status is available from Zhang, US005995189 and Iida, US006388723B1.

2. Claims 3-5, 7 and 18-20 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al, U.S. Patent #5,585,951, in view of Shirahashi et al U.S. Patent # 5,285,301, Sato et al, U.S. Patent # 6,081,305 and Miyawaki et al, U.S. Patent # 5,822,028.

Noda et al discloses a first insulating substrate with picture element electrodes in a matrix, a second opposite substrate with a counter electrode having portions above each pixel electrode, aligned and sealed with liquid crystal interposing, with the first substrate having switching elements line driving means, color filters and light shielding layers corresponding to the transistors. It is not clear from Noda that the black matrix goes around the perimeter. The use of a black matrix extends around the perimeter was notoriously well known for preventing light leakage and shielding for drive circuits, and would have been obvious for that reason. All the above listed secondary references show active matrix devices with black layers in the extending in the peripheral regions, and therefore provide evidence of this assertion of the well known status of these layers for the above mentioned purposes.

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3. Claims 3- 5, 7 and 18-20 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al, U.S. Patent #6,162,654, in view of Shirahashi et al U.S. Patent # 5,285,301, Sato et al, U.S. Patent # 6,081,305 and Miyawaki et al, U.S. Patent # 5,822,028.

Kawabe et al discloses a first insulating substrate with picture element electrodes in a matrix, a second opposite substrate with a counter electrode having portions above each pixel electrode, aligned and sealed with liquid crystal interposing, with the first substrate having switching elements line driving means, color filters and light shielding layers corresponding to the transistors. It is not clear from Kawabe et al that the black matrix goes around the perimeter. The use of a black matrix extends around the perimeter was notoriously well known for preventing light leakage and shielding for drive circuits, and would have been obvious for that reason. Kawabe et al employs an electrodeposition method for putting down the color filters. All the above listed secondary references show active matrix devices with black layers in the

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extending in the peripheral regions, and therefore provide evidence of this assertion of the well known status of these layers for the above mentioned purposes.

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Driver circuits in the periphery was well known for reducing the cost of connecting separate drivers, and would have been obvious for that reason. Miyawaki et al evidences this, disclosing such a device. Further evidence of the well known status is available from Zhang, US005995189 and Iida, US006388723B1.

Response to Amendment

Applicant has not argued that it was well known to extend the black matrix into the pixel portions, something clearly reflected in the currently recited references, (and which can easily be shown in a dozen more). Applicant only argues that the primary reference does anticipate the device (not relevant as the rejection was under 103), and applicants point to earlier arguments (applicant indicates the arguments were from a paper of 11/28/01, however, as no paper was received sent on that date, it is assumed applicant was referring to the paper of 1/24/02). In that paper applicant argues individually each reference, not the collective teaching. The examiner contends that it was notoriously well known that the peripheral portion had to be light shielded and was normally done with already present black matrix, and that the collective references clearly provide evidence of this fact, points to which applicant has not challenged. If it is well

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known to make the black matrix extend to surround the pixel area, it is not material that the examples have the black matrixes supplied as examples show the counter electrode substrate. Further, since a light absorbing layer is on the first substrate, that light absorbing layer would be used as the light absorbing layer elsewhere, as to use a different one without reason would be the addition of an unnecessary layer, which those in the liquid crystal art, where the level of skill is high, would have been obvious not to do.

Should applicant chose to challenge the assertion that extending the black matrix into the peripheral area was notoriously well known and that the evidence fails to establish that fact, the examiner will provide additional references to provide further evidence of this fact.

Additionally, a second reference, Noda has been applied with the same secondary references. Noda clearly indicates that a point of there invention was to prevent the need to align the color filter substrate "Additionally, the black mask and the full color filter are integrally formed on the active-matrix substrate using the planarization layer. As a result, the alignment error is neglected".

Another reference, **Kawabe et al** has been applied which employs electrodeposition of the color filters, also as a primary reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Parker whose telephone number is (703) 305-6202. The fax phone

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number for this Group is (703) 308-7722. Any inquiry of a general nature or relating to the status of this application or preceding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

October 1, 2002



**KENNETH ALLEN PARKER
PATENT EXAMINER
GAU 2871**